



PHY·IOLO

MAT

Exter. Agents act.

I By nourishing the

a. Drink... Po

When they

b. Food.... CIBI

When they

\* By the ex...

... of health...

... of health...

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... of health...

I.

PHYSIOLOGICAL CLASSIFICATION \*

OF THE

MATERIA MEDICA,

BY

DR DUNCAN JUNIOR.

---

External Agents act,

I. By nourishing the Body, . ALIMENTA.

a. Drink.. ...POTUS.

When they act medicinally, . . . DILUENTIA.

b. Food.....CIBI.

When they act medicinally, . . . DEMULCENTIA.

\* By the expression *Physiological Classification* is here meant an arrangement of substances according to the effects which they produce upon the body in a state of health, in contradistinction to their *therapeutical* effects, which depend on the presence of certain diseases. The physiological effect is constant both in health and disease; but the therapeutical effects are various according to the nature of the disease present. Thus, Cinchona is febrifuge if it stop an ague—antiseptic if it check gangrene—antispasmodic if it cure hysteria—anthelmintic if it expel worms. To a physiological classification of the *Materia Medica* authors have been gradually approaching; but a few therapeutical orders are still retained, as antispasmodics, lithontriptics, anthelmintics, antiseptics, &c.; while others have admitted too much of hypothesis into their principle of classification. I have attempted to avoid therapeutical distinctions entirely, and to derive the characters of the orders from the obvious and recognized effects of medicinal agents.

## II. By Evacuation, . . . . EVACUANTIA.

a. By the skin insensibly, . . . . . DIAPHORETICA.  
 — — — — sensibly, . . . . . SUDORIFICA.

b. By the mucous membrane,  
 of the Nostrils, . . . . . ERRHINA.  
 of the Lungs, . . . . . EXPECTORANTIA.  
 of the Stomach, . . . . . EMETICA.  
 of the Intestines, . . . . . CATHARTICA.  
 of the Uterus, . . . . . EMMENAGOGA.

c. By Glandular Secretion,  
 The Kidneys, . . . . . DIURETICA.  
 The Salivary Glands, . . . . . SALOGOGA.

## III. By exciting the vital powers,... STIMULANTIA.

a. Chiefly of the parts to which } TOPICA.  
 they are applied, . . . }

Applied externally,

Causing redness, . . . . . RUBEFACIENTIA.  
 ——— serous secretion, . . . . . VESICANTIA.  
 ——— purulent secretion, . . . . . SUPPURANTIA.

Administered internally,

CONDIMENTA when alimentary.

When acting medicinally, . . . . . CARMINATIVA.

b. Of the system generally, . . . . . GENERALIA.

a. Obscurely, but more } PERMANENTIA.  
 durably, . . . }

Producing no immediate obvious } TONICA.  
 effect, . . . . . }

Constricting fibres and coagu- } ASTRINGENTIA.  
 lating fluids, . . . . . }

b. More evidently but less } TRANSITORIA.  
 durably, . . . }

Acting on the organic functions,... CALEFACIENTIA.

Acting on the mental functions, ... INEBRIANTIA.

## IV. By depressing the vital powers,...DEPRIMENTIA.

Acting on the organic functions, . . . . . REFRIGERANTIA.

Acting on the mental functions, . . . . . NARCOTICA.

V. By chemical influence on the } CHEMICA.  
 fluids, . . . . . }

Acidifying, . . . . . ACIDA.

Alkalizing, . . . . . ALKALINA.

## II.

## OFFICINAL EMOLLIENTS AND DEMULCENTS \*.

## VEGETABLE.

I. *Amylaceous, Mucilaginous, or Saccharine* †.

## MALVACEÆ

Malva sylvestris—*Herba*.Althæa officinalis—*Radix*--*Folia*.

## LINEÆ.

Linum usitatissimum—*Semina*.

## PAPAVERACEÆ.

Papaver somniferum--*Capsulæ*.

## LEGUMINOSÆ.

Acacia vera—*Gummi Arabicum*.Astragalus Tragacantha--*Gummi Tragacantha*.Glycyrrhiza glabra—*Radix*—*extractum*.

## ROSACEÆ.

Pyrus Cydonia—*Semina*.Prunus domestica—*Fructus*.

## UMBELLIFERÆ.

Daucus Carota—*Radix*.

## COMPOSITÆ.

Anthemis nobilis—*Flores*.Inula Helenium—*Radix*.

## COMPOSITÆ.

Tussilago Farfara—*Folia*.Lactuca sativa—*Folia*.

## BORAGINEÆ.

Anchusa tinctoria—*Radix*.

## SOLANÆ.

Solanum Dulcamara—*Stipites*.

## LABIATÆ.

Marrubium vulgare—*Herba*.

## URTICEÆ.

Ficus Carica—*Fructus*.

## SMILACEÆ.

Smilax Sarsaparilla—*Radix*.

## GRAMINEÆ.

Avena sativa—*Semina*.Hordeum distichum—*Semina*.Triticum hybernum—*Semina*.Saccharum officinarum—*Saccharum*.

## LICHENES.

Lichen Islandicus.

\* That these lists may not extend to too great a length, I have thought it expedient to limit them to the articles which are officinal in some of the British Pharmacopœias, subjoining occasionally a short notice of some other substances.

† The substances in this order agree in being digested and assimilated when taken into the stomach. In their general effect on the system, they are alimentary, and not medicinal. The action for which they are used in medicine is purely local. As fluids, they soften the tissues to which they are applied, and from their viscosity they protect it from irritants. In their nature they are either oily, or saccharine, or glutinous. The last section includes all such substances as gum, starch, albumen, and gelatine, and is the most bland of the whole; while the saccharine substances are not devoid of stimulus.



II. *Oleaginous.*

## LINEÆ.

Linum usitatissimum—*Oleum.*

## OLEINEÆ.

Olea Europæa—*Oleum.*

## ROSACEÆ.

Amygdalus communis—*Semina*—*Oleum.*

## PALMÆ.

Cocos butyracea—*Oleum palma.*

## ANIMAL.

## MUCAGINOUS.

Ichthyocalla.

Cornu cervi—*Gelatina.*

Mel.

## OLEAGINOUS.

Adeps suillus.

—— ovillus.

Cetacenum.

Cera.

## III.

## OFFICINAL DIAPHORETICS AND SUDORIFICS.

## VEGETABLE \*.

## RUTACEÆ.

Guaiacum officinale —*Cortex*  
—*Lignum*—*Resina.*Ruta graveolens—*Herba.*

## CRUCIFERÆ.

Sinapis nigra—*Semina.*

## PAPAVERACEÆ.

Opium.

## POLYGALEÆ.

Polygala Senega—*Radix.*

## LEGUMINOSÆ.

Copaifera officinalis—*Resina.*

## CAPRIFOLIÆ.

Sambucus nigra—*Flores.*

## RUBIACEÆ.

Cephaëlis Ipecacuanha—*Radix.*

## VALERIANEÆ.

Valeriana sylvestris—*Radix.*

## COMPOSITÆ—CORYMBIFERÆ.

Inula Helenium—*Radix.*Arnica montana—*Radix*—*Herba*  
—*Flores.*

## CYNAROCEPHALEÆ.

Arctium Lappa—*Radix.*

## ERICINEÆ.

Rhododendron Chrysanthum—  
*Folia.*

## SOLANEÆ.

Capsicum annuum—*Fructus.*Solanum Dulcamara—*Stipites.*

## LABIATÆ.

Hyssopus officinalis—*Herba.*Melissa officinalis—*Herba.*Mentha pulegium—*Herba.*Rosmarinus officinalis—*Herba.*Salvia officinalis—*Herba.*

\* Besides the vegetables here enumerated, many others act upon the skin, when their operation is directed to that organ, by dilution conjoined with warmth. Of this nature are all vegetables which contain acrid resins, all spices, all fragrant herbs containing volatile oil, and all herbs possessed of a volatile pungent principle, as the cruciform plants and the onion tribe.



## V.

## OFFICINAL EXPECTORANTS.

## A. TOPICAL,

*Applied in the form of liquid to the fauces.*

Emollients and Demulcents in general,

*Applied in the form of gas or vapour to the mucous membrane of the lungs.*

Nicotiana Tabacum— <i>Folia.</i>	Alcohol.
Datura Stramonium— <i>Herba.</i>	Ætherea.
Myrrha.	Acidum Benzoicum.
Pix liquida.	———— aceticum.
Olea volatilia.	Ammonia.
Aqua.	Ammonia carbonas.

## B. GENERAL,

*Taken into the stomach, and acting through the circulation\*.*

## VEGETABLE.

## TEREBINTHACEÆ.

Amyris Gileadensis—*Terebinthina.*

———— Kataf?—*Myrrha.*

Toluifera Balsamum—*Balsamum.*

## POLYGALEÆ.

Polygala Senega—*Radix.*

## LEGUMINOSÆ.

Copaifera officinalis—*Terebinthina.*

Myroxylon peruiferum—*Balsamum.*

## UMBELLIFERÆ.

Bubon Galbanum—*Gummi-resina.*

Ferula Assafoetida—*Gum.-resina*

Ferula Ferulago? *Ammoniacum*†

Ferula? *Sagapenum.*

## RUBIACEÆ.

Cephaëlis Ipecacuanha—*Radix.*

## EBENACEÆ.

Styrax officinale—*Balsamum.*

———— Benzoin—*Balsamum.*

## SOLANACEÆ.

Datura Stramonium—*Semina.*

## LABIATÆ.

Hyssopus officinalis—*Herba.*

Marrubium vulgare—*Herba.*

Melissa officinalis—*Herba.*

Mentha Pulegium—*Herba.*

———— sativa—*Herba.*

Salvia officinalis—*Herba.*

## ARISTOLOCHIÆ.

Asarum Europæum—*Folia.*

## LICHENES.

Lichen Islandicus.

\* The existence of this order of expectorants can no longer be doubted, since the experiments of recent physiologists have proved that medicinal substances are absorbed into the circulating system, and that they stimulate the organ by which they are excreted. That the mucous membrane of the lungs is occasionally employed for this purpose, appears from the smell of the breath being tainted by these unassimilable substances.

† Probably from a species of *Ferula*, certainly not from the *Heracleum gum-miferum*.



## INORGANIC.

Tarttras antimonii.

## VI.

## OFFICINAL EMETICS \*.

## I. VEGETABLE.

## CRUCIFERÆ.

Sinapis nigra—*Seminum pulvis.*

## RUBIACEÆ.

Cephaëlis Ipecacuanha—*Radix.*

## COMPOSITÆ—CORYMBIFERÆ.

Anthemis nobilis—*Flores.*

## SOLANÆÆ.

Nicotiana Tabacum—*Folia.*

## ARISTOLOCHIÆ.

Asarum Europæum—*Folia.*

## LILIACEÆ.

Scilla maritima—*Bulbus.*

## II. INORGANIC.

Ammoniæ carbonas.

Antimonium tartarizatum.

Zinci sulphas.

Cupri sulphas.

## VII.

## OFFICINAL CATHARTICS.

## I. VEGETABLE.

a. *Emollient, Mucilaginous, Saccharine.*

## VIOLACEÆ.

Viola odorata—*Flores.*

## SARMENTACEÆ.

Vitis vinifera—*Baccæ siccatae.*

## LEGUMINOSÆ.

Cassia fistula—*Leguminis pulpa.*Tamarindus Indica—*Legumen.*

## ROSACEÆ.

Prunus domestica—*Fructus siccatus.*Rosa canina—*Fructus.*

## CAPRIFOLIÆ.

Sambucus nigra—*Bacca.*

## COMPOSITÆ—CICHORACEÆ.

Leontodon Taraxacum—*Radix.*

## OLEINEÆ.

Fraxinus ornus—*Succus concretus—Manna.*

## URTICEÆ.

Ficus carica—*Fructus siccatus.*

## GRAMINEÆ.

Hordeum distichon—*Semina.*Saccharum officinarum—*Saccharum impurum.*

\* The number of substances capable of exciting vomiting is very great. The operation of all of them is assisted by repletion of the stomach; and where great torpor exists, titillation of the posterior fauces will sometimes provoke vomiting.

b. *Oily.*

## OLEINEÆ.

Olea Europæa—*Oleum.*

## EUPHORBIACEÆ.

Ricinus communis—*Oleum.*Croton Tiglium—*Oleum.*

## CONIFERÆ.

Pinus sylvestris—*Oleum volatile.*c. *Resinous.*

## GUTTIFERÆ.

Gambogia \*.

## TEREBINTHACEÆ.

Pistacia Terebinthus—*Terebinthina Chia.*Amyris Gileadensis—*Terebinthina.*

## LEGUMINOSÆ.

Copaifera officinalis—*Terebinthina.*

## CONVOLVULACEÆ.

Convolvulus Scammonia—*Resina.*————— Jalapa—*Radix—Resina.*

## EUPHORBIACEÆ.

Euphorbia officinarum—*Resina.*

## CONIFERÆ.

Pinus Larix—*Terebinthina.*————— Canadensis—*Terebinthina.*d. *Extractive, nauseous, bitter, or aërid.*

## LINEÆ.

Linum catharticum—*Herba.*

## CRUCIFERÆ.

Sinapis nigra—*Semina integra.*

## FRANGULACEÆ.

Rhamnus catharticus—*Baccae.*

## LEGUMINOSÆ.

Cassia Senna—*Folia.*Spartium Scoparium—*Summitates.*Geoffroya inermis—*Cortex.*

## CAPRIFOLIÆ.

Sambucus nigra—*Cortex.*

## COMPOSITÆ—CINAROCEPHALÆ.

Arctium Lappa—*Radix.*

## CUCURBITACEÆ.

Cucumis colocynthis—*Pepones.*Momordica Elaterium—*Succus concretus fructus.*

## GENTIANÆ.

Menyanthes trifoliata—*Herba.*Spigelia Marilandica—*Herba.*

## LABIATÆ.

Gratiola officinalis—*Herba.*

## IRIDÆ.

Iris Florentina—*Radix.*

## FILICES.

Aspidium Filix-mas—*Radix.*e. *Narcoticæ.*

## RANUNCULACEÆ.

Helleborus niger—*Radix.*————— fœtidus—*Radix.*

## SOLANACEÆ.

Nicotiana Tabacum—*Folia.*

## COLCHICACEÆ.

Colchicum autumnale—*Bulbus.*Veratrum album—*Radix.*

\* Gamboge is probably the product of a non-descript species of *Garcinia*, certainly not of the *Stalagmitis Cambogioides*.

f. *Astringent.*

## ROSACEÆ.

Rosa centifolia—*Petala.*

## POLYGONEÆ.

Rheum Turcicum \*—*Radic.*Rumex aquaticus—*Radic.*II. *ANIMAL.**Emollient.*

Honey.

III. *INORGANIC.*a. *Saline.*

Magnesia.

Magnesiæ carbonas.

———— sulphas.

Potassæ sulphas.

———— supersulphas.

———— tartras.

Potassæ supertartras.

———— acetas.

Sodæ murias.

———— phosphas.

———— sulphas.

———— et potassæ tartras.

b. *Metallic.*

Calomelas.

Pilulæ Hydrargyri.

Pulvis Antimonialis.

Tartras Antimonii.

c. *Inflammable.*

Sulphur.

## VIII.

## OFFICINAL EMMENAGOGUES †.

## VEGETABLE.

## RANUNCULACEÆ.

Helleborus niger.

## RUTACEÆ.

Ruta graveolens.

\* Turkey rhubarb is now known to be the product of the *Rheum australe*.

† The existence of this class has been altogether doubted; and when we consider the great variety of causes upon which the defect of the menstrual secretion may depend, it may be granted that the power of exciting the secretion in all cases is not possessed by any substance. But upon the same grounds, the existence of many other classes of medicines might be denied. A better founded objection would be, that the uterus is not an organ intended for the elimination of foreign matters, which therefore seldom reach it. Increased action may be excited in it by any stimulus directly applied, as electricity, friction, or heat; or by sympathy, by stimulating the rectum, bladder, and neighbouring parts.

## GUTTIFERÆ.

Gambogia.

## CRUCIFERÆ.

Sinapis alba—*Semina*.

## UMBELLIFERÆ.

Gummi fœtida.

## RUBIACEÆ.

Rubia tinctorum—*Radix*.

## VALERIANEÆ.

Valeriana officinalis—*Radix*.

## COMPOSITÆ—CORYMBIFERÆ.

Artemisia Abrotanum—*Herba*.Tanacetum vulgare—*Herba*.

## ARISTOLOCHIÆ.

Aristolochia Serpentaria.

## CONIFERÆ.

Juniperus Sabina—*Folia*.

## IRIDEÆ.

Crocus sativus—*Stigmata*.

## LILIACEÆ.

Aloës Socotorina—*Extractum*.

## IX.

## OFFICINAL DIURETICS \*.

## I. VEGETABLE.

## a. Stimulant.

## TEREBINTHACEÆ.

Gambogia.

## LOMENTACEÆ.

Copaifera officinalis—*Terebinthina*.Spartium Scoparium—*Summitates*.

## MYRTI.

Melaleuca Leucadendron—*Oleum volatile*.

## CONIFERÆ.

Juniperus communis—*Oleum volatile*.Pinus sylvestris—*Oleum volatile*.

\* The action of Diuretics, and indeed of internal medicines in general, has been much elucidated by the experiments of recent physiologists, especially of Dr Wohler and Dr Stehberger. They have ascertained more precisely than had been previously done, the state in which, and the time at which, various substances appear in the urine after being taken into the stomach.

## 1. Substances which pass off by Urine unchanged.

Carbonate of Potass.

Nitrate of Potass.

Chlorate of Potass.

Sulpho-cyanate of Potass.

Hydrosulphuret of Potass.

Ferro-cyanate of Potass.

Silicate of Potass.

Tartrate of Nickel and Potass.

Borax.

Muriate of Barytes.

Astringency of Uva Ursi.

## Colouring Principles.

Indigo.

Madder.

Rhubarb.

Gamboge.

Logwood.

Red radishes.

Mulberry.

Black cherry.

Cassia fistula.

Elder rob.

b. *Narcotic.*

## COMPOSITÆ—CICHORACEÆ.

Lactuca virosa—*Succus concretus.*Leontodon Taraxacum—*Radix.*

## SOLANÆÆ.

Nicotiana Tabacum—*Folia.*

## PERSONATÆ.

Digitalis purpurea—*Folia.*Gratiola officinalis—*Herba.*

## LILIACEÆ.

Scilla maritima—*Bulbus.*

## COLCHICACEÆ.

Colchicum autumnale—*Bulbus.**Odorous principles somewhat altered.*

Oil of Turpentine.

— of Juniper.

Valerian.

Saffron.

Assafoetida.

Garlic.

Castor.

Opium.

The narcotic principle of the Agaricus muscarius.

2. *Substances which pass in a state of combination.*

Sulphur, as sulphuric acid and sulphuretted hydrogen.

Iodine, as hydriodic acid.

Oxalic

Tartaric

Gallic

Succinic

Benzoic

} acids in combination with an alkali.

3. *Substances which pass in a decomposed state.*

Tartrate

Citrate

Malate

Acetate

} of Potass or Soda } changed into the Carbonate of the same alkali.

Hydro-sulphuret of Potass, changed in a great measure into the sulphate of potass.

Oxy-ferro-cyanate of Potass, changed into the Ferro-cyanate of potass.

4. *Substances which did not re-appear in the Urine.*

Iron.

Lead.

Alcohol.

Sulphuric ether.

Dippel's oil.

Musk.

Cochineal.

Litmus.

Sap green.

Alkanet.

Quassia.

Camphor.

Carbonic acid not increased in quantity.

Madder and Indigo appeared in the urine 15 minutes after they were taken into the stomach; Rhubarb and Gallic Acid in 20; Logwood in 25; Vaccinium myrtillus in 30; Black Cherries and Uva Ursi in 45; pulp of Castia fistula in 55; Ferro-prussiate of Potass in 66; and Elder rob in 75.



## II. ANIMAL.

Cantharis vesicatoria.

## III. INORGANIC.

a. *Stimulant.*

## 1. Volatile.

Alcohol.

Spiritus ætheris nitrosi.

## 2. Fixed.

Murias ferri.

Murias hydrargyri.

Pilula hydrargyri.

Tartras antimonii.

b. *Refrigerant.*

## 1. Rendering the urine acid.

Acida mineralia diluta.

## 2. Rendering the urine alkaline.

Potassæ carbonas.

—— supercarbonas.

—— acetas.

—— tartras.

—— supertras.

Sodæ carbonas.

—— supercarbonas.

Sodæ et potassæ tartras.

## 3. Not rendering the urine either acid or alkaline.

Potassæ nitras.

—— chloras.

—— hydrosulphuretum.

—— ferro-cyanas.

Sodæ subboras.

Barytæ murias.

## X.

## OFFICINAL SIALAGOGUES \*.

## VEGETABLE.

## HESPERIDÆ.

Citrus Aurantium—*Fructus immaturi*—*Curaçao*.

## CRUCIFERÆ.

Cochlearia Armoracia—*Radix*.

## TEREBINTHACÆ.

Pistacia Lentiscus—*Resina*—*Mastiche*.

## POLYGALEÆ.

Polygala Seneka—*Radix*.

## LEGUMINOSÆ.

Pterocarpus Draco—*Resina*.

## MYRTI.

Myrtus Pimenta—*Fructus*.Eugenia caryophyllata—*Fructus*.

## UMBELLIFERÆ.

Angelica archangelica—*Radix*.

## COMPOSITÆ—CORYMBIFERÆ.

Anthemis Pyrethrum—*Radix*.

\* Sialagogues, besides the increased flow of saliva, cause also an increased secretion of mucus from the membrane of the mouth and fauces. Mercury is the only substance which produces salivation through the medium of the circulation; but every acrid substance chewed, or applied directly to the orifices of the salivary ducts, acts as a topical sialagogue. The stimulus of food received into the stomach, and even the sight or expectation of food, produces an increased secretion of saliva.

## SOLANÆÆ.

Nicotiana Tabacum—*Folia*.Capsicum annuum—*Fructus*.

## LAURINÆÆ.

Laurus Cassia—*Fructus immaturi*.

## MYRISTICÆÆ.

Myristica moschata—*Fructus*.

## THYMALEÆ.

Daphne Mezereon—*Cortex*.

## URTICÆÆ.

Piper nigrum—*Baccæ*.—— longum—*Fructus*.

## DRYMYRRHIZÆ.

Amomum Zingiber—*Radix*.—— Cardamomum—*Fructus*.

## IRIDÆÆ.

Iris Florentina—*Radix*.

## JUNCEÆ.

Acorus Calamus—*Radix*.

## INORGANIC.

Hydrargyrum.

## XI.

OFFICINAL EPISPASTICS; INCLUDING RUBE-  
FACIENTS AND ESCHAROTICS.

## VEGETABLE.

## RANUNCULACÆÆ.

Delphinium Staphisagria—*Semina*.Ranunculus acris—*Herba*.

## RUTACÆÆ.

Ruta graveolens—*Herba*.Guaiacum officinale—*Oleum*.

## CRUCIFERÆ.

Sinapis alba—*Seminum pulvis*.Cochlearia Armoracia—*Radix*.

## TEREBINTHACÆÆ.

Amyris elemifera—*Resina*.

## MYRTI.

Melaleuca Leucadendron—*Oleum Cajepul*.Eugenia caryophyllata—*Fructus oleum volatile*.

## UMBELLIFERÆ.

Gummi-resina Ammoniacum.

Gummi-resina Sagapenum.

Bubon Galbanum—*Gummi-resina*.

## UMBELLIFERÆ.

Pastinaca Opoponax—*Gummi-resina*.

## COMPOSITÆ—CORYMBIFERÆ.

Anthemis Pyrethrum—*Radix*.

## SOLANÆÆ.

Capsicum annuum—*Baccæ*.

## LAURINÆÆ.

Laurus Cinnamomum—*Oleum*.—— Sassafras—*Oleum*.—— Camphora—*Camphora*.

## THYMALEÆ.

Daphne Mezereon—*Cortex*.

## EUPHORBIACÆÆ.

Euphorbia officinarum—*Resina*.

## URTICÆÆ.

Piper nigrum—*Baccæ*.—— longum—*Fructus*.

## CONIFERÆ.

Pinus Larix—*Terebinthina-Oleum terebinthinae-Resina*.Juniperus Sabina—*Folia-Oleum volatile*.

## AROIDÆ.

Arum maculatum—*Radix recens.*

## LILIACEÆ.

Allium sativa—*Bulbus.*  
 ——— Cepa—*Bulbus.*

## DRYMYRRHIZÆ.

Zingiber officinale—*Radix.*

## ANIMAL.

Cantharis vesicatoria.

## INORGANIC.

Alcohol fortius.

Æther sulphuricus.

Acida mineralia fortiora.

Acidum aceticum fortius.

Ammonia.

Potassa.

Calx.

Calcis murias.

Argenti nitras.

Hydrargyri murias.

———— oxidum rubrum.

Cupri sulphas.

———— subacetas.

Zinci sulphas.

Antimonii tartras.

———— murias.

## XII.

## OFFICINAL CARMINATIVES.

## UMBELLIFERÆ.

Anethum Fœniculum—*Semina.*

———— graveolens—*Semina.*

Angelica archangelica—*Radix.*

Carum Carui—*Semina.*

Coriandrum sativum—*Semina.*

Cuminum Cyminum—*Semina.*

Daucus Carota—*Semina.*

Pimpinella Anisum—*Semina.*

## LABIATÆ.

Hyssopus officinalis—*Herba.*

Lavandula Spica—*Flores.*

Melissa officinalis—*Herba.*

Mentha Piperita—*Herba.*

———— Pulegium—*Herba.*

———— viridis—*Herba.*

Origanum Majorana—*Herba.*

———— vulgare—*Herba.*

Rosmarinus officinalis—*Herba.*

Salvia officinalis—*Herba.*

## XIII.

## OFFICINAL SPICES AND ACRID STIMULI.

## MAGNOLIACEÆ.

Drymis aromatica—*Cortex Winteri.*

## RUTACEÆ.

Guaiacum officinale—*Lignum—Cortex—Resina.*

Ruta graveolens—*Herba.*

## HESPERIDEEÆ.

Citrus aurantium—*Cortex fructûs.*

—— medica—*Cortex fructûs.*

## MELIACEÆ.

Canella alba—*Cortex.*

## POLYGALEEÆ.

Polygala Senega—*Radix.*

## MYRTI.

Melaleuca Leucadendron—*Oleum Cajeputi.*

Myrtus Pimenta—*Fructus.*

Eugenia caryophyllata—*Fructus.*

## COMPOSITÆ—CORYMBIFERÆ.

Anthemis Pyrethrum—*Radix.*

Arnica montana—*Radix—Flores Folia.*

## SOLANEÆ.

Capsicum annuum—*Fructus.*

## LAURINEÆ.

Laurus Cinnamomum—*Cortex.*

—— Cassia—*Cortex.*

## LAURINEÆ.

Laurus nobilis—*Baccæ.*

—— Sassafras—*Lignum.*

—— Camphora—*Camphora.*

## MYRISTICÆÆ.

Myristica moschata—*Nux—Macis.*

## ARISTOLOCHIÆ.

Aristolochia Serpentaria—*Radix.*

Asarum Europæum—*Folia.*

## EUPHORBIACEÆ.

Croton Eleutheria—*Cortex.*

## MONIMIÆ.

Dorstenia Contrayerva—*Cortex.*

## URTICEÆ.

Piper nigrum—*Fructus.*

—— longum—*Fructus.*

—— Cubeba—*Fructus.*

## CONIFERÆ.

Juniperus Sabina—*Folia.*

## AROIDEÆ.

Arum maculatum—*Radix.*

## DRYMYRRHIZÆ.

Zingiber officinale—*Radix.*

Amomum Zedoaria—*Radix.*

Amomum Cardamomum—*Fructus.*

## JUNCEÆ.

Acorus Calamus—*Radix.*

## XIV.

## OFFICINAL TONICS.

## I. VEGETABLE.

## MENISPERMEÆ.

Menispermum palmatum--*Radix Columbæ.*

## SIMARUBEÆ.

Quassia excelsa—*Cortex.*

Quassia Simaruba—*Cortex.*

## RUTACEÆ.

Bonplandia trifoliata—*Cortex Angusturæ.*

## RUBIACEÆ.

Cinchona officinalis—*Cortex.*

## COMPOSITÆ—CORYMBIFERÆ.

Anthemis nobilis—*Flores.*

## COMPOSITÆ—CORYMBIFERÆ.

Artemisia Absinthium--*Herba.*

———— Santonica--*Summitates.*

## ———— CYNAROCEPHALÆ.

Tanacetum vulgare—*Herba.*

Cnicus benedictus—*Herba.*

## GENTIANEÆ.

Gentiana lutea—*Radix.*

Menyanthes trifoliata—*Herba.*

Spigelia Marilandica—*Herba.*

Chironia Centaurium—*Summitates.*

## II. MINERAL.

*Saline.*

Murias sodæ.

———— calcis.

Murias barytæ.

*Metallic.*

Arsenicum.

Ferrum.

Zincum.

Cuprum.

Argentum.

Stannum.

Bismuthum.

## XV.

## OFFICINAL ASTRINGENTS.

## VEGETABLE.

## MELIACEÆ.

Swietenia Mahagoni—*Cortex.*

———— febrifuga—*Cortex.*

## ACERINEÆ.

Æsculus Hippocastanum--*Cortex.*

## POLYGALEÆ.

Krameria triandra—*Radix Rhataniæ.*

## LEGUMINOSÆ.

Acacia vera—*Succus spissatus.*

Acacia Catechu—*Extractum.*



## LEGUMINOSÆ.

*Butea frondosa*—*Succus spissatus*, var. *Kino*.

*Hæmatoxylon Campechianum*  
—*Extractum ligni*.

*Pterocarpus Africanus*—*Succus spissatus*, *Kino verum*.

## ROSACEÆ.

*Agrimonia Eupatoria*—*Herba*.

*Geum urbanum*—*Radix*.

*Rosa Gallica*—*Petala*.

*Tormentilla erecta*—*Radix*.

## SALICARIÆ.

*Lythrum Salicaria*—*Radix*.

## MYRTI.

*Punica Granatum*—*Cortex radicis*—*Flores*—*Cortex*  
(*Epicarpium*) *fructus*.

*Eucalyptus resinifera*—*Succus spissatus*, varietas *Kino*.

## RUBIACEÆ.

*Cinchona rubra*—*Cortex*.

*Rubia tinctorum*—*Radix*.

## ERICINEÆ.

*Arbutus Uva-ursi*—*Folia*.

## POLYONEÆ.

*Polygonum Bistorta*—*Radix*.

*Rheum australe*—*Radix*.

*Rumex aquaticus*—*Radix*.

## LAURINEÆ.

*Laurus Cinnamomum*—*Cassia*  
—*Cortex*.

## AMENTACEÆ.

*Quercus Robur*—*Cortex*.

———— *infectoria*—*Galla*.

*Salix alba*, *fragilis*, *Caprea*—*Cortex*.

*Ulmus campestris*—*Cortex*.

## CONIFERÆ.

*Pinus Larix*—*Cortex*.

*Mineral Styptics.*

*Acetas plumbi*.

*Sulphas cupri*.

———— *zinci*.

*Murias ferri*.

*Nitras argenti*.

*Saline Styptics.*

*Acidum sulphuricum*.

———— *aceticum*.

*Alumen*.

## XVI.

## OFFICINAL RESINOUS STIMULI.

## RUTACEÆ.

*Guaiacum officinale*—*Resina*.

## TEREBINTHACEÆ.

*Amyris Gilcadensis*—*Terebinthina*.

*Pistacia Lentiscus*—*Resina*.

———— *terebinthus*—*Terebinthina*.

## TEREBINTHACEÆ.

*Toluifera balsamum*—*Balsamum*.

## LEGUMINOSÆ.

*Copaifera officinalis*—*Terebinthina*.

*Myroxylon peruiferum*—*Balsamum*.

## EBENACEÆ.

Styrax officinale—*Balsamum*—  
*Resina*.  
 — Benzoin—*Balsamum*—  
*Resina*.

## EUPHORBIACEÆ.

Euphorbia officinarum—*Resina*.

## CONIFERÆ.

Pinus ; plurimæ species,  
*Terebinthina vulgaris*.  
 — *Veneta*.  
*Balsamum Canadense*—*Terebinthina*.  
*Resina sponte concreta*.  
 Juniperus Lycia—*Olibanum* \*.

## XVII.

OFFICINAL FŒTID STIMULI.—ANTISPASMODICS  
 OF AUTHORS.

## VEGETABLE.

## UMBELLIFERÆ.

Bubon Galbanum—*Gummi-resina*.  
 Ferula Assafoetida—*Gummi-resina*.  
 Pastinaca Opoponax—*Gummi-resina*.

## UMBELLIFERÆ.

*Gummi-resina Ammoniacum*.  
*Gummi-resina Sagapenum*.

## VALERIANEÆ.

*Valeriana sylvestris*—*Radix*.

## IRIDEÆ.

*Crocus sativa*—*Stigmata*.

## ANIMAL.

Moschus.

Castoreum.

## INORGANIC.

Petroleum.

Empyreumatic Oils—*Animal*—  
*Dippel's oil*—*Burnt feathers*  
*—Oil of Amber*.

Volatile Oils—*Oil of Turpentine*  
*—Oil of Cajeput*.

There are other substances which act as Antispasmodics, upon different principles :

Narcotics—as *Opium*.

Intoxicators—as *Ether*.

Tonics—as *Wormwood*.

Mineral Tonics—as *Copper*—*Silver*—*Zinc*.

\* The *Olibanum* of the shops is furnished by the *Boswellia serrata*.

## XVIII.

## OFFICINAL VOLATILE PUNGENT STIMULI,

## ONE ORDER OF ANTISCORBUTICS.

## CRUCIFERÆ.

- Cardamine pratensis—*Herba*.  
 Cochlearia Armoracia—*Radix*.  
 ——— officinalis—*Herba*.  
 Sinapis alba—*Semina*.  
 ——— nigra—*Semina*.

## LILIACEÆ.

- Allium sativum—*Bulbus*.  
 ——— Cepa—*Bulbus*.  
 ——— Porrum—*Radiculæ*.

There are other substances which are also useful in scurvy, but they operate upon very different principles.

Acid Fruits—as *Lemons*.

Acid Vegetables—as *Sorrel*.

Bitter Vegetables—as *Dandelion*.

Spices—as *Winter's Bark*.

Fresh Animal Food.

## XIX.

## OFFICINAL REFRIGERANTS\*.

## VEGETABLE †.

## HESPERIDEÆ.

- Citrus Aurantium—*Fructus succus*.  
 ——— medica—*Fructus succus*.

## GERANIACEÆ—OXALIDEÆ.

Oxalis Acetosella.

## LEGUMINOSÆ.

Tamarindus Indica—*Legumen*.

## ROSACEÆ.

- Prunus domestica—*Fructus*.  
 Rosa canina—*Fructus*.

## COMPOSITÆ—CICHORACEÆ.

Lactuca sativa—*Herba*.

## POLYGONEÆ.

Rumex Acetosa—*Folia*.

## URTICEÆ.

Morus nigra—*Fructus*.

\* The most powerful, if not the only, refrigerant is Cold; cold air, cold bath, cold drink; all of which not only abstract heat from the body, but have a tendency to reduce the calorific function. But the substances commonly considered as Refrigerants act by evacuation or by inducing nausea.

† There are many other subacid fruits, which are used as refrigerant articles of diet, although not officinal; also some animal products, as butter-milk, and acid whey.

## INORGANIC.

Dilute Mineral Acids, especially the Sulphuric.

All Vegetable Acids.

All Acid Salts, as Supersulphate of Potass and Alum, and Supertartrate of Potass.

Neutral Salts, largely diluted, especially

Nitrate of Potass.

Subborate of Soda.

Some Metallic Salts,

Acetate of Lead.

Tartrate of Antimony.

## XX.

## OFFICINAL NARCOTICS.

## VEGETABLE.

## RANUNCULACEÆ.

Aconitum Napellus—*Folia*.

Helleborus niger—*Herba*.

Delphinium Staphisagria—*Semina*.

## MENISPERMEÆ.

Menispermum Cocculus—*Semina*.

## PAPAVERACEÆ.

Opium.

Papaver somniferum—*Capsulæ*.

Papaver Rhæas—*Petala*.

## TEREBINTHACEÆ.

Rhus Toxicodendron—*Folia*.

## ROSACEÆ.

Amygdalus communis—*Amygdalæ amaræ*.

———— Persica—*Folia*.

Prunus Laurocerasus—*Folia*.

## UMBELLIFERÆ.

Conium maculatum—*Folia*.

## COMPOSITÆ—CICHORACEÆ.

Lactuca virosa—*Succus concretus*.

———— sativa—*Succus concretus*.

## STRYCHNEÆ.

Strychnos Nuxvomica—*Nuces*.

## SOLANÆÆ.

Atropa Belladonna—*Folia*.

Datura Stramonium—*Herba—Capsulæ—Semina*.

Hyoscyamus niger—*Folia*.

Nicotiana Tabacum—*Folia*.

Verbascum Thapsus—*Folia*.

## PERSONATÆ.

Digitalis purpurea—*Folia*.

Gratiola officinalis—*Herba*.

## LAURINEÆ.

Laurus Camphora—*Camphora*.

Crocus sativus—*Stigmata*.

## COLCHICACEÆ.

Colchicum autumnale—*Bulbus*.

## INORGANIC.

Acidum hydrocyanicum.

Acidum oxalicum.

## XXI.

## OFFICINAL ACIDS.

Acidum sulphuricum.

—— nitricum.

—— muriaticum.

—— aceticum.

Acidum citricum.

—— tartaricum.

—— benzoicum.

—— succinicum.



## XXI.

## OFFICINAL ALKALINES.

Potass.

Soda.

Ammonia.

Lime.

Magnesia.

and their combinations with  
carbonic acid.





LIST  
OF  
OFFICIAL PLANTS  
IN THE  
BRITISH PHARMACOPŒIAS,  
ARRANGED  
ACCORDING TO THE NATURAL ORDERS\*.

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DICOTYLEDONES.

RANUNCULACEÆ.—*Acrid, narcotic,  
purgative, emetic.*

*Aconitum Napellus*, var. *paniculatum*, *Dec.*

*Delphinium Staphisagria*.

*Helleborus niger*.

———— *foetidus*.

MAGNOLIACEÆ.—*Stimulant ; aromatic.*

*Drymis* (Wintera) *aromatica*.

MENISPERMEÆ.—*Bitter, narcotic.*

*Menispermum Cocculus* (*C. suberosus, Dec.*)

*Colomba ; C. palmatus.*

\* In this list I have followed the system adopted by M. De CANDOLLE in his Essay on the Medical Properties of Plants, as that best adapted for the purpose.

Of the various principles upon which the numerous articles of the vegetable Materia Medica may be considered in a course of Lectures, the classification according to a Natural Botanical Arrangement seems to me to possess many advantages. It not only is the most suitable for combining in one discourse the natural, medicinal, and pharmaceutical history of each vegetable, but, by the great similarity which exists in these respects among the individuals forming each family, much repetition is avoided ; while a great deal of information can be easily given concerning articles, which, though not official in this kingdom, are possessed of virtues that render them valuable in other countries, and may lead to their introduction into more general use. Accordingly, Professor MURRAY of Göttingen, in his celebrated *Apparatus Medicaminum*, followed the natural arrangement of LINNÆUS ; and modifications of that of JUSSIEU have been adopted by DE CANDOLLE and RICHARD.

On the present occasion I have confined myself to the plants official in the British Pharmacopœias as those of most importance to British practitioners, reserving to a future opportunity the publication of a general list, for which my collections, although considerable, are not complete.

MALVACEÆ.—*Mucilaginous ; demulcent.*  
 Malva sylvestris.  
 Althæa officinalis.  
 SIMARUBEÆ.—*Bitter, tonic.*  
 Quassia excelsa.  
 ——— Simaruba.  
 RUTACEÆ.—*Stimulant.*  
 a. *Zygophylleæ.*  
 Guaiacum officinale.  
 b. *Rutaceæ veræ.*  
 Ruta graveolens.  
 c. *Diosmeæ.*  
 Diosma crenata.  
 d. *Cuspariæ.*  
 Bonplandia trifoliata (Cusparia febrifuga).  
 CARYOPHYLLÆ.—*Fragrant.*  
 Dianthus Caryophyllus.  
 LINEÆ.—*Mucilaginous, oily, bitter, cathartic.*  
 Linum usitatissimum.  
 ——— catharticum.  
 VIOLACEÆ.—*Fragrant, emetic.*  
 Viola odorata.  
 HESPERIDEÆ.—*Rind aromatic ; juice acidulous.*  
 Citrus aurantium.  
 ——— medica.  
 MELIACEÆ.—*Aromatic, astringent.*  
 Canella alba.  
 Swietenia Mahagoni.  
 SARMENTACEÆ.—*Fruit sweet, sub-*  
 Vitis vinifera, [acid.  
 GERANIACEÆ—OXALIDEÆ.—*Acid.*  
 Oxalis. Acetosella.  
 GUTTÆFERÆ.—*Resinous, purgative.*  
 Stalagmitis cambogioides.  
 Dryabalonops Camphora.  
 CRUCIFERÆ.—*Volatile pungency, stimulant.*  
 ——— *Siliquosæ.*  
 Cardamine pratensis.  
 Sinapis alba.  
 ——— nigra.

CRUCIFERÆ.  
 Sisymbrium Nasturtium.  
 ——— *Siliculosæ.*  
 Cochlearia Armoracea.  
 ——— officinalis.  
 PAPAVERACEÆ.—*Anodyne.*  
 Papaver somniferum.  
 ——— Rhæas.  
 FRANGULACEÆ.—*Demulcent, purgative.*  
 Rhamnus catharticus.  
 TEREBINTHACEÆ.—*Resinous, stimulant.*  
 Amyris elemifera.  
 ——— Gileadensis.  
 Boswellia serrata.  
 Pistacia Terebinthus.  
 ——— Lentiscus.  
 Rhus Toxicodendron.  
 Toluifera Balsamum.  
 POLYGALEÆ.—*Acrid, bitter, astringent.*  
 Polygala Senega.  
 Krameria triandra.  
 LEGUMINOSÆ.—*Gummy, amylaceous, saccharine, purgative, resinous, astringent.*  
 Acacia Arabica.  
 ——— vera.  
 ——— Catechu.  
 Astragalus Tragacantha.  
 ——— verus.  
 ——— Creticus.  
 Cassia Senna.  
 ——— fistula.  
 Copaifera officinalis.  
 Dolichos pruriens.  
 Geoffræa inermis.  
 Glycyrrhiza glabra.  
 Hæmatoxylon Campechianum.  
 Myroxylon Peruiferum.  
 Pterocarpus Santolinus.  
 ——— Draco.  
 ——— crinacea.  
 Spartium Scoparium.

## LEGUMINOSÆ.

Tamarindus Indica.

ROSACEÆ.—*Saccharine, emulsive,  
astringent, narcotic.*

Amygdalus communis.

————— *var. amara.*

————— Persica.

Geum urbanum.

Prunus domestica.

————— Laurocerasus.

Pyrus Cydonia.

Rosa canina.

————— centifolia.

————— Gallica.

T tormentilla erecta.

## SALICARIÆ.

Lythrum Salicaria.

MYRTI.—*Aromatic; astringent.*

Melaleuca Leucadendron.

Myrtus Pimenta.

Punica Granatum.

Eucalyptus resinifera.

Eugenia caryophyllata.

UMBELLIFERÆ.—*Aromatic, fœtid  
stimuli.*

Anethum Fœniculum.

————— graveolens.

Angelica Archangelica.

Bubon Galbanum.

Carum Carui.

Conium maculatum.

Coriandrum sativum.

Cuminum Cyminum.

Daucus Carota.

Ferula Assafœtida.

Heracleum gummiferum.

Pastinaca Opoponax.

Pimpinella Anisum.

CAPRIFOLIÆ.—*Laxative.*

Sambucus nigra.

RUBIACEÆ.—*Tonic, emetic.*

Cinchona cordifolia.

————— lancifolia.

————— oblongifolia.

## RUBIACEÆ.

Cephaëlis Ipecacuanha.

Rubia tinctorum.

VALERIANEÆ.—*Fœtid stimulant.*

Valeriana officinalis.

COMPOSITÆ.—*Bitter stimulant, nar-  
cotic.*a. *Corymbiferæ.*

Anthemis nobilis.

————— Pyrethrum.

Arnica montana.

Artemisia Absinthium.

————— Chinensis.

————— Indica.

————— Santonica.

Inula Helenium.

Tanacetum vulgare.

Tussilago Farfara.

b. *Cynarocephalæ.*

Arctium Lappa.

Cnicus (Centaurea) benedictus.

c. *Cichoraceæ.*

Lactuca virosa.

————— sativa.

Leontodon Taraxacum.

CUCURBITACEÆ.—*Bitter, purga-  
tive.*

Cucumis Colocynthis.

Momordica Elaterium.

ERICINEÆ.—*Astringent, narcotic.*

Arbutus Uva-ursi.

Rhododendrum Chrysanthum.

Pyrola umbellata.

EBENACEÆ.—*Resinous, balsamic.*

Styrax officinale.

————— Benzoin.

OLEINEÆ.—*Oleaginous, demulcent.*

Olea Europæa.

Fraxinus Ornus (Manna).

STRYCHNEÆ.—*Bitter, narcotic.*

Strychnos Nux-vomica.

GENTIANÆ.—*Bitter, tonic.*

Chironia (Erythræa) Centau-

Gentiana lutea. [reum.



## GENTIANÆ.

Menyanthes trifoliata.

Spigelia Marilandica.

CONVOLVULACEÆ.—*Resinous, purgative.*

Convolvulus Scammonia.

————— Jalapa.

BORAGINÆÆ.—*Mucilaginous, coloring.*

Anchusa tinctoria.

SOLANÆÆ.—*Narcotic, acrid.*

Atropa Belladonna.

Capsicum annuum.

Datura Stramonium.

Hyoscyamus niger.

Nicotiana Tabacum.

Solanum Dulcamara.

Verbascum Thapsus.

PERSONATÆ.—*Narcotic, diuretic.*

Digitalis purpurea.

Gratiola officinalis.

Scrophularia nodosa.

LABIATÆ.—*Fragrant.*

Hyssopus officinalis.

Lavandula spica (vera.)

Marrubium vulgare.

Melissa officinalis.

Mentha Piperita.

———— Pulegium.

———— viridis.

Origanum Majorana.

———— vulgare.

Rosmarinus officinalis.

Salvia officinalis.

POLYDONEÆ.—*Astringent, acid, purgative.*

Polygonum Bistorta.

Rheum palmatum.

———— undulatum.

Rumex aquaticus.

———— Acetosa.

LAURINEÆ.—*Aromatic, narcotic.*

Laurus Cinnamomum.

———— Cassia.

## LAURINEÆ.

Laurus nobilis.

———— Sassafras.

———— Camphora.

MYRISTICÆÆ.—*Aromatic.*

Myristica moschata.

THYMALEÆÆ.—*Acrid.*

Daphne Mezereum.

ARISTOLOCHIÆÆ.—*Acrid.*

Aristolochia Serpentaria.

Asarum Europæum.

EUPHORBIACEÆ.—*Stimulant purgative, resinous, oily.*

Croton (Eleutheria) Cascarilla.

———— Tiglium.

Euphorbia officinarum.

———— Canariensis.

Ricinus communis.

MONIMIEÆÆ.—*Stimulant.*

Dorstenia Contrayerva.

URTICEÆÆ.—*Acrid, bitter, demulcent.*

Ficus Carica.

Humulus Lupulus.

Morus nigra.

Piper nigrum.

———— longum.

———— Cubeba.

AMENTACEÆÆ.—*Astringent, mucilaginous.*

Quercus Robur.

———— infectoria.

———— pedunculata.

Salix fragilis.

———— alba.

———— Caprea.

Ulmus campestris.

CONIFERÆÆ.—*Resinous.*

Pinus Abies (Abies picea).

———— sylvestris.

———— Larix (Larix Europæa).

———— Balsamea (Abies bals.)

Juniperus communis.

———— Sabina.

———— Lycia.



## MONOCOTYLEDONES.

DRYMYRRHIZÆ.—*Aromatic, amy-*  
*Zingiber officinale. [laceous.*  
*Amomum Zingiber (Z. offici-*  
*nale).*

———— Cardamomum.  
 ————— repens (Matonia  
 Cardamomum)

Curcuma longa.

IRIDEÆ.—*Fragrant.*

Crocus sativus.

Iris Florentina.

SMILACEÆ.—*Mucilaginous.*

Smilax Sarsaparilla.

LILIACEÆ.—*Pungent, bitter, pur-*  
*gative, emetic.*

Allium sativum.

———— Cepa.

———— Porrum.

Aloe spicata.

LILIACEÆ.

Aloe vulgaris.

Scilla maritima.

COLCHICACEÆ.—*Narcotic.*

Colchicum autumnale.

Veratrum album.

PALMÆ.—*Oily, amylaceous.*

Cocos butyracea.

JUNCEÆ.—*Fragrant.*

Acorus Calamus.

GRAMINEÆ.—*Amylaceous, saccha-*

*Avena sativa. [rine.*

Hordeum distichon.

Saccharum officinarum.

Triticum hybernum.

FILICES.

Aspidium (Polypodium) Filix  
 mas.

## ACOTYLEDONES.

LICHENES. — *Amylaceous, colour-*  
*ing.*

Lichen (Cetraria) Islandicus.

Rocella tinctoria.

FUNGI.

Boletus igniarius.

ALGÆ.

Fucus vesiculosus.









